

WHAT IS CLAIMED IS:

1. A fastening apparatus for use in endoscopic surgery comprising:
 - a) a handle portion;
 - b) a triggering mechanism; and
 - c) a fastener applicator comprising a shaping slide having a cooperating notch that has as its widest width a distance essentially equal to the width of the shaping slide.
2. A fastening apparatus for use in endoscopic surgery comprising:
 - a) a handle portion;
 - b) a triggering mechanism; and
 - c) a fastener applicator comprising a shaping slide with a cooperating notch that is angled to closely receive an anvil with an essentially triangular cross-section.
3. The apparatus of claim 1 wherein the cooperating notch is angled to closely receive an anvil with an essentially triangular cross-section.
4. The apparatus of claim 1 wherein the cooperating notch has a shape which closely receives a round-edged cross-section of an anvil.
5. A fastening apparatus for use in endoscopic surgery comprising:
 - a) a handle portion;

- b) a triggering mechanism; and
- c) a fastener applicator comprising an anvil having a single fastener-forming point.

6. A fastening apparatus for use in endoscopic surgery comprising:

- a) a handle portion;
- b) a triggering mechanism; and
- c) a fastener applicator comprising an anvil having an essentially round-edged cross-section.

7. The apparatus of claim 5 wherein the anvil has a cross-section that is essentially triangular.

8. The apparatus of claim 6 wherein the anvil has a cross-section that is essentially semi-circular.

9. The apparatus of claim 5 wherein the fastener applicator further comprises a plurality of fasteners.

10. The apparatus of claim 9 wherein the fastener applicator is separable from said handle portion.

11. A surgical fastening apparatus for endoscopic surgery comprising:
 - a) a handle portion;
 - b) a triggering mechanism; and
 - c) a detachable fastener applicator having a set of vertically stacked fasteners.
12. The apparatus of claim 11 wherein the detachable fastener applicator further comprises two cooperating half-shells.
13. The apparatus of claim 11 wherein the detachable fastener applicator further contains a storage channel and a driving channel.
14. The apparatus of claim 11 wherein the detachable fastener applicator contains a slide actuator.
15. The apparatus of claim 14 wherein said slide actuator is lockable by engagement of a pin that alternately engages and disengages said slide actuator in response to said pin's interaction with recesses in the handle portion.

16. A fastening apparatus for use in endoscopic surgery comprising:
- a) a handle portion;
 - b) a triggering portion; and
 - c) a fastener applicator having a fastener storage channel and a fastener driving channel.
17. An apparatus as in claim 16 wherein said storage channel and driving channel are parallel.
18. A surgical fastening apparatus for endoscopic surgery comprising:
- a) a handle portion;
 - b) a triggering portion; and
 - c) a fastener applicator having a plurality of biased springs.
19. An apparatus as in claim 18 wherein at least one of said biased springs is a leaf spring.
20. An apparatus as in claim 18 wherein the fastener applicator further comprises a movable slide whose location controls the position of said biased springs.

21. An apparatus as in claim 20 wherein at least one of said biased springs is a fastener stop spring.

22. An apparatus as in claim 17 wherein the location of said movable slide controls the opening from the storage channel to the driving channel.

23. An apparatus as in claim 20 wherein at least one of said biased springs is an ejector spring.

24. A surgical fastening apparatus for endoscopic surgery comprising:

- a) a handle portion;
- b) a triggering portion; and
- c) a fastener applicator comprising two or fewer actuated parts.

25. An apparatus as in claim 24 wherein said actuated parts number two and move together linearly.

26. A fastening apparatus for use in endoscopic surgery comprising:

- a) a handle portion housing a plunger assembly wherein said plunger assembly further comprises a ratchet;
- b) a triggering portion; and

- c) a fastener applicator.

27. The apparatus of claim 26 wherein said handle portion further houses a pawl engagable with said ratchet so as, to prevent mid-stroke reversal of travel by said plunger assembly.

28. The apparatus of claim 26 wherein said pawl is orientated by a spring.

29. The apparatus of claim 26 wherein said pawl rests in a slot in said handle portion.

30. A method of fastening a surgical fastener in endoscopic surgery comprising the steps of:

- a) placing a fastener applicator in close proximity with a surgical target;
- b) triggering the fastener applicator to drive a fastener over an anvil so as to form a fastener with a single bend in its back;
- c) discharging the fastener from the fastener applicator;
- d) removing the fastener applicator from close proximity with said surgical target.